



Fact Sheet

South Carolina's Business RECYCLING Assistance Program

Energy Conservation is Smart Business

As a business owner, would you like to save money? And while you're doing that, help conserve natural resources and protect the environment?

Did you know commercial buildings use 17 percent of the total energy consumed in the United States, according to the U.S. Department of Energy? Given that, businesses, by reducing their energy consumption, can experience several benefits, including saving money on power bills, conserving non-renewable fossil fuels, as well as lessening the environmental impact of gas emissions and the greenhouse effect.

Energy savings can be accomplished many ways – from turning off the lights when you leave your office or conference room to a comprehensive overhaul of a business's heating, venting and air conditioning unit (HVAC). Many building owners consider energy costs a fixed expense when, in fact, with a few well-placed changes, the cost savings can be significant and directly affect the bottom line. The chart at the bottom right shows the different sources of energy used by commercial buildings. Amazingly, almost 87 percent goes towards heating, cooling and lighting your space, all of which can be significantly reduced by steps to improve energy efficiency.

The Benefits

There are reduced costs associated with energy conservation, although it is important to take into account the initial investment in replacing outdated lighting and HVAC systems. Typically, this can pay itself back in two-to-three years and have subsequent returns on investments of 30-40 percent.

Another reason to think about energy conservation is pollution prevention. Carbon dioxide emissions from energy consumed by the commercial sector have increased to nearly 30 percent since 1980, according to GreenBiz.com. By becoming environmental stewards and reducing unnecessary energy consumption, businesses can protect the precious air we need to survive.

Many people think energy conservation means sacrifice, when in fact, new energy-saving technologies actually may provide your employees and customers with a more comfortable and productive work environment.

Develop an Action Plan

Set an energy policy, whether you include it as part of your company's waste reduction and recycling policy or as a stand-alone statement that outlines your company's

commitment to reducing energy consumption and waste. Consider a policy that includes calculating energy savings as a part of your daily business decisions and operations.

Like the waste reduction and recycling policy, you must have management support to show employees your company's commitment. In addition,

encourage employee participation by asking them for ideas on how to save energy in the office or in production.

Next, you'll need to establish a base line for your building's energy consumption. Review the past year's power bills to determine what is being spent on energy and see if there are any trends you can identify based on time of year and increases or decreases in the amount of power used. You may want to consider having an energy audit. Your local utility may have staff available to help you or you may call the S.C. Energy Office at **1-800-851-8899** to set one up.

Energy efficiency means using less energy for heating, cooling and lighting. It also means buying energy-saving appliances and equipment for use in a building.

Percentage of Energy Use in Commercial Buildings by End Use

Space Heating	42 percent
Lighting	23 percent
Cooling	22 percent
Cooking/Other	10 percent
Water	3 percent

SOURCE: Energy Cost Savings Council

The U.S. Environmental Protection Agency (U.S. EPA) has developed a comprehensive program, Energy Star Buildings, to assist the commercial sector implement energy saving programs. You can learn more on-line at www.energystar.gov.

According to the U.S. EPA, there are several causes for wasted energy in most commercial buildings. Many use equipment that is outdated or simply the wrong size for the job required. In some cases, the equipment is inefficient or not properly maintained. Not only does this inefficient energy usage result in higher power bills, it also makes your workplace less comfortable and employees less productive. By effectively managing your building's energy consumption, you can reduce operating costs and improve comfort at the same time.

Upon completion of an energy audit, your business may need to consider investing in some equipment upgrades to foster reductions in energy usage. Some upgrades may include:

1. **Switching to Green Lights.** Since lighting can account for up to 40 percent of your energy costs, switching to new lighting technologies may help you reduce energy expenses by 50-70 percent, decrease glare, reduce maintenance costs and improve your overall work environment.
2. **Have a Building Tune-Up.** This makes sure your equipment is maintained and operating properly and efficiently.
3. **Reducing Power Loads.** Using energy-efficient office equipment and reducing the effects of drafts or excessive sun exposure may reduce your building's power loads, resulting in lower electric, heating and cooling costs.







Additional Information and Resources

www.plugin.com www.state.sc.us/energy
www.eren.doe.gov www.greenbiz.com
www.energystar.gov

The Federal Energy Management Program's "Buying Energy Efficient Products" binder can be ordered by calling **1-800-363-3732**.

4. **Upgrading Fan Systems.** Make sure your fan system isn't blowing too much air. Many buildings have systems that are much larger and less efficient than they actually need.
5. **Upgrading HVAC Systems.** By using the above-mentioned steps, you will experience reduced heating and cooling consumption. Don't purchase a system that is larger than what you actually need. Savings generated by reductions already made should help you afford the most energy efficient equipment available.

Basic Tips for Energy Conservation

-  Turn down the thermostat – it is one of the easiest steps to take towards conserving energy. Set it for 78 degrees in the summer and 68 degrees in the winter and remember to dress appropriately for the temperature.
-  Insulate and block unused windows.
-  If your computers and office equipment don't have built-in power management features, such as power save modes, turn them off when not in use.
-  Lower the temperature on the thermostat of your hot water heater to 115 degrees.
-  Replace air filters on a regular basis to maintain efficiency.
-  Optimize energy in your manufacturing processes and activities. For example, capture and reuse waste heat, computerize heating and cooling systems and use high efficiency motors.

When building, 'green' saves money in the long run.

Because so many buildings built before the 1990s have inefficient electrical equipment, consider a whole building approach to energy conservation when building.

According to the Office of Energy Efficiency and Renewable Energy, depending on the aggressiveness of the design, experience has shown that it costs no more than 10 percent more to build a high performance building. Total energy costs are, on average, about 50 percent less than those for conventionally designed buildings.